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EXAMINER

MANCHO, RONNIE M

ART UNIT	PAPER NUMBER
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3663

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/683,602

Applicant(s)

MILLER ET AL.

Examiner

Ronnie Mancho

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Lemelson et al (5983161).

Regarding claim 1, Lemelson et al (abstract, fig. 1) disclose a method for operating a pre-crash sensing system, a counter-measure system, for a first vehicle proximate a second vehicle comprising:

generating an object detection signal (Lidar/Radar; col. 18, lines 44-51) over a field of view from a first vehicle (col. 17, lines 19-62);

receiving the object detection signal at the second vehicle when positioned within the field of view (col. 17, lines 19-62);

generating a response signal in response to said object detection signal (col. 17, lines 19-62), said response signal including a key (CDMA, etc; col. 18, lines 30-43);

establishing a communication link between said first vehicle and said second vehicle using said key (CDMA, etc; col. 18, lines 30-43);

communicating a first vehicle data signal (i.e. position; col. 17, lines 19-62) to the second vehicle using said key (CDMA, etc; col. 18, lines 30-43); and

communicating a second vehicle data signal (position, velocity, etc; col. 17, lines 19-62) to the first vehicle using said key (CDMA, etc; col. 18, lines 30-43).

Regarding claim 2, Lemelson et al (abstract, figs. 13-15; col. 27, lines 24-67) disclose the method as recited in claim 1 further comprising entering first vehicle information from the first vehicle data signal into a second vehicle threat registry and wherein the first vehicle information is classified or ranked within the registry.

Regarding claim 3, (as best understood), Lemelson et al (abstract, figs. 13-15; col. 27, lines 24-67) disclose the method as recited in claim 2 wherein classifying comprises classifying the first vehicle information as an imminent threat.

Regarding claim 4, (as best understood), Lemelson et al (abstract, figs. 13-15; col. 27, lines 24-67) disclose the method as recited in claim 3 further comprising allocating a system resource in response to the imminent threat.

Regarding claim 5, Lemelson et al (abstract, figs. 13-15; col. 27, lines 24-67) disclose the method as recited in claim 1 further comprising communicating the second vehicle threat registry to a third vehicle adjacent to the second vehicle.

Regarding claim 6, Lemelson et al (abstract) disclose the method as recited in claim 1 wherein communicating a first vehicle data signal comprises communicating a first position of the first vehicle.

Regarding claim 7, Lemelson et al (abstract) disclose the method as recited in claim 1 wherein communicating a second vehicle data signal comprises communicating a second position of the second vehicle.

Regarding claim 8, Lemelson et al (abstract) disclose the method as recited in claim 1 wherein communicating a first vehicle data signal comprises communicating a first heading information of the first vehicle.

Regarding claim 9, Lemelson et al (abstract) disclose the method as recited in claim 1 wherein communicating a second vehicle data signal comprises communicating second heading information (col. 17, lines 62-67) of the second vehicle.

Regarding claim 10, Lemelson et al disclose the method as recited in claim 1 wherein communicating a first vehicle data signal comprises communicating first trajectory information of the first vehicle to the second vehicle (col. 17, lines 62-67).

Regarding claim 11, Lemelson et al (abstract, figs. 13-15; col. 27, lines 24-67) disclose the method as recited in claim 1 further comprising classifying a threat level as a function of the first vehicle trajectory.

Regarding claim 12, Lemelson et al disclose the method as recited in claim further comprising activating a counter-measure system (col. 20, lines 8-20) in response to the threat level.

Regarding claim 13, Lemelson et al disclose the method as recited in claim 1 wherein said vehicle information comprises heading and speed (see GPS).

Regarding claim 14, Lemelson et al (abstract, fig. 1) disclose a method for operating a pre-crash sensing system, a counter-measure system, for a first vehicle proximate a second vehicle comprising:

establishing a communication link (col. 17, lines 19-62) between said first vehicle and a plurality of vehicles by exchanging a communication key (CDMA, etc; col. 18, lines 30-43);

communicating a vehicle data to the first vehicle from the plurality of vehicles (col. 17, lines 19-62) using the key; and

entering the vehicle data into the first vehicle threat registry (figs. 13-15; col. 25, lines 7-67);

ranking the vehicle data by vehicle within the registry in one of a plurality of classes (figs. 13-15; col. 25, lines 7-67).

Regarding claim 15, Lemelson et al (abstract, fig. 1) disclose the method as recited in claim 14 further comprising ranking some as the vehicle data as an imminent threat registry (figs. 13-15; col. 25, lines 7-67).

Regarding claim 16, Lemelson et al (abstract, fig. 1) disclose the method as recited in claim 14 further comprising allocating a system resource in response to the imminent threat.

Regarding claim 17, Lemelson et al (abstract, fig. 1) disclose the method as recited in claim 14 further comprising estimating a time to impact.

Regarding claim 18, Lemelson et al (abstract, fig. 1) disclose the method as recited in claim 14 further comprising activating an avoidance countermeasure when the time to impact is greater than a time threshold.

Regarding claim 19, Lemelson et al (abstract, fig. 1) disclose the method as recited in claim 14 further comprising activating an impact countermeasure when the time to impact is less than a time threshold.

Regarding claim 20, Lemelson et al (abstract, fig. 1) disclose the method as recited in claim 14 wherein generating a vehicle data signal comprises generating a vehicle type signal, a vehicle weight signal or *a vehicle size signal*.

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Regarding claim 21, (as best understood), Lemelson et al (abstract, fig. 1) disclose a system for sensing a potential collision of a first vehicle with a second vehicle, wherein the second vehicle transmits a second vehicle information signal using a key (CDMA, etc; col. 18, lines 30-43) exchanged between the first vehicle and the second vehicle, said first vehicle having a pre-crash sensing system comprising:

- a threat registry (FAM 204, col. 25, lines 1-67);

- a position sensor (GPS 32, fig. 1; col. 19, lines 44-50) generating a first position signal corresponding to a position of the first vehicle;

- a first sensor (transceiver 30, fig. 3; col. 19, lines 30-42) generating sensor signals from the first vehicle;

- a receiver (transceiver 30, fig. 3; col.19, lines 30-42) receiving the second vehicle position signal generated from the second vehicle using the key (CDMA, etc; col. 18, lines 30-43);

- a countermeasure system (214, 216; fig. 9; col. 24, lines 33-44; col. 25, lines 19-25);

- a controller 200 (col. 24, lines 56 to col. 25, lines 1-6) coupled to the threat registry (FAM 204. Note that 204 is part of 38; col. 24, lines 56-58), the position sensor 32, the first sensor 30, the receiver 30, and said counter measure system (214, 216; fig. 9; col. 24, lines 33-44; col. 25, lines 19-25), said controller 200 determining a time to collision (note that time is computed from acceleration, velocity or distance as indicated by the applicant) and a distance to collision (i.e. distance to hazard; col. 25, lines 26-35; col. 27, lines 30-37) in response to the second vehicle information, the first position signal and the second vehicle position (note that distance to hazard embraces the distance computed between position of first vehicle and position

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of second vehicle), said controller 200 determining a threat level (col. 24, lines 56 to col. 25, lines 1-6; col. 25, lines 28-39; col. 27, lines 25-41) as a function of the time to collision and the distance to collision (see kinematics tracking; col. 34, lines 53-64, etc), activating the countermeasure system in response to the threat level (col. 24, lines 33-44; col. 25, lines 16-25) and storing the vehicle and threat level in the threat registry (FAM; col. 25, lines 7-53).

Regarding claim 22, (as best understood), Lemelson et al (abstract, fig. 1) disclose the system as recited in claim 21 wherein said controller 200 comprises system resources, said controller allocating system resources in response to said threat level.

Regarding claim 23, (as best understood), Lemelson et al (abstract, fig. 1) disclose the system as recited in claim 21 wherein said counter measure system comprises avoidance countermeasures and mitigation countermeasures (214, 216; fig. 9; col. 24, lines 33-44; col. 25, lines 19-25), said controller 200 choosing to activate said avoidance countermeasures or mitigation countermeasures in response to said threat level.

Response to Arguments

3. Applicant's arguments filed 12-12-03 have been fully considered but they are not persuasive for the following:

The applicant has based all his arguments on the issue that the prior art, Lemelson et al do not disclose allowing vehicles to communicate using a key. In response, the examiner respectfully disagrees. The applicant's disclose a communication link used for communicating between two vehicles close to each other when a collision is eminent. The applicant did not further disclose what the key was or what the nature of the key is. Well, as understood in the art

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of communications and signal processing, the word key is also used in other forms such as keyword, code or codeword, etc. The examiner has interpreted the word, key as known in the art of communications and signal processing. Lemelson et al disclose vehicles in communication using a key such as CDMA, which CDMA is a coded signal also known as a signal carrying a key intended to be received and processed only by receivers which can interpret the key or coded signal. Other vehicles that do not have the key i.e. the code in the signal cannot receive or interpret the signal.

Therefore, the prior art anticipates all the claims.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Communication

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronnie Mancho whose telephone number is 703-305-6318. The examiner can normally be reached on Mon-Thurs: 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Black can be reached on 703-305-8233. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

Ronnie Mancho
Examiner
Art Unit 3663

March 15, 2004


THOMAS G. BLACK
SUPERVISORY PATENT EXAMINER
GROUP 3600